

GRAIN-SORGHUM CROP

Two Ways by Which It Can Be
Made of Greater Value.

Most Useful in Regions Where Moisture Is Often Controlling Factor in Crop Production — Are Drought Resistant.

(By CARLETON R. BALL, Bureau of Plant Industry, U. S. Department of Agriculture.)

In general there are two ways by which the grain-sorghum crops can be made of greater value to the grower. The first is by improving the varieties; the second, by finding more rapid and economical methods of harvesting. Improved varieties can be obtained through selection of present sorts and by bettering the methods of growing them. More rapid and economical harvesting will come about either through adapting the crops to present machinery or through the invention of new machines, or both.

There are five principal ways in which improvement may be made: (1) increased drought resistance, (2) increased earliness, (3) dwarfier stature, (4) greater productiveness, and (5) increased machine harvesting.

The grain sorghums are most useful in regions where moisture is often the controlling factor in crop production. Much good should therefore be accomplished by increasing their drought resistance, especially in the areas of lighter rainfall.

No one knows exactly what drought resistance is. It is probable that what we call drought resistance is the effect of several different factors. The most important of these factors are probably (1) increased ability to prevent the loss of water by transpiration, (2) increased development of the root system, and (3) a possible increase in power to extract water from a dry soil.

Differences in the power to control transpiration are well-known and readily observed facts. By transpiration is meant the passing of water from the tissues of the plant into the air. In the processes of their growth all plants are constantly absorbing water from the soil through their rootlets and allowing certain quantities of this moisture to pass out into the air through minute pores, called stomata. This is done in much the same manner as water escapes through the animal skin in the form of perspiration. In times of drought it is important that the plant lose as little as possible of its water supply in this way. The plant best fitted to prevent transpiration is thus the most drought resistant. In fact, for instance this ability is highly perfected. Corn is much less drought resistant than the members of the various groups of sorghums. Corn is in danger when the leaves begin to curl, but sorghums often remain in this condition for a long time without permanent injury.

The size and character of the root system is probably a strong factor in drought resistance. The larger the root system in proportion to the plant the better it can supply moisture. The wider and deeper its penetration, the larger the area of soil from which it draws moisture in times of drought. A deeply rooting plant may be able to secure water when shallow root systems lie wholly in dry soil. This is entirely apart from possible differences in ability to secure moisture from a given unit of soil. Such differences may exist, but the idea is only a theory as yet. Unfortunately, the character of the root system cannot be observed while making observations.

Spanish-American for news.

A FARM OF YOUR OWN

How to Get It:

WE HAVE a choice selection of Farm lands, Irrigated lands, Town lots, Ranches, Homesteads, Relinquishments. We have the best for the farmer and homeseeker. Get a good farm at a low price. The price of this land will double in the next two years.

Why

Pay \$25.00 to \$100.00 for farm land, when you can get 320 acres of as good agricultural land in New Mexico, FREE, from the U. S. Government upon payment of nominal filing, locating and surveying fee, which, together with railroad fare, does not exceed \$100.00.

Write

For full particulars about this wonderful country if you are interested, and if you should want to trade good property for a Patented and Deeded farm, write us the description of your property, and we will tell you what we can do for you.

We have in our building, a United States Commissioner, a Land Locator, and a Surveyor.

Write us what kind of a farm you want

REFERENCES: Our hundreds of Satisfied Clients.

E. J. H. ROY, President

W. FRED OGDEN, Secretary

Roy Real Estate & Abstract Company

Roy, - - - New Mexico